

Figure 1a

6A1 VH			
6A1	EVQLVQSGAEVKKPGESLTISCKGSGYNFF	NKWTIG	WVRQMPGKGLEWMG 50
Vh5_DP-73__5-51	EVQLVQSGAEVKKPGESLKISCKGSGYSFT	SNWTIG	WVRQMPGKGLEWMG
6A1	LYPGRDSIDTRVSPSFOG	QVTISVDKSI	STAYLQWSSLKASDTAMYICAR 100
Vh5_DP-73__5-51	LYPGRDSIDTRVSPSFOG	QVTISADKSI	STAYLQWSSLKASDTAMYICAR ..
6A1	RYCPGGRGMSGATGMDV	WGRGTMVTVSS	128 SEQ ID NO:108
Vh5_DP-73__5-51	.....	WGQGTMTVTVSS	JH3 SEQ ID NO:144
6A1 VL			
6A1	SSELTQDPAVSVALGQTVRITC	QCDSTERSVVAS	WYQQKPGQAPVLIY 50
Vlambda3_DPL16__31_	SSELTQDPAVSVALGQTVRITC	QCDSTERSVVAS	WYQQKPGQAPVLIY
6A1	NKRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	HSRDSGSHVVL FG 100
Vlambda3_DPL16__31_	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	NSRDSGSHVVL FG
6A1	GGTKLTVLGA	110 SEQ ID NO:109	
Vlambda3_DPL16__31_	GGTKLTVL..	JL3 SEQ ID NO:151	

# Figure 1b

## 7A2 VH

7A2  
Vh5\_DP-73\_\_5-51\_  
GVQLVQSGAEVKKPQESLTISKSGYNFF NAWTC WVRQMPGKGLEWMG 50  
EVQLVQSGAEVKKPQESLKISKSGYSFT SMTTC WVRQMPGKGLEWMG 50

7A2  
Vh5\_DP-73\_\_5-51\_  
EYPTDSDFRVSFSGOG BVTISYDKSISTAYLQWSSLKASDTAMYCAR ST 100  
INPCDSDFRVSFSGOG QVTISADKSISTAYLQWSSLKASDTAMYCAR ..

7A2  
Vh5\_DP-73\_\_5-51\_  
RYCPGGGRCWSGIACNDV WGQGTMTVSS 128 SEQ ID NO:110  
..... WGQGTMTVSS JH3 SEQ ID NO:144

## 7A2 VL

7A2  
Vlambda3\_DPL16\_\_31\_  
SSELTQDPAVSVALGQTVRITC QGDSIRSWAFN WFQQKPGQAPLLVY AK 50  
SSELTQDPAVSVALGQTVRITC QGDSIRSWAFS WYQQKPGQAPLVLY GK 50

7A2  
Vlambda3\_DPL16\_\_31\_  
NKRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNEFAV FG 100  
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNEFAV FG 100

7A2  
Vlambda3\_DPL16\_\_31\_  
GGTKLTVLGA 110 SEQ ID NO:111  
GGTKLTVL.. JL3 SEQ ID NO:151

Figure 1c

7A4 VH					
7A4	EVQLVQSGAEVKKPGESLTISCKGSGYNFF	NVWITG	WVRQMPGKGLEWNG	50	
Vh5_DP-73__5-51_	EVQLVQSGAEVKKPGESLKISCKGSGYSFT	SNWITG	WVRQMPGKGLEWNG		
7A4	IVPTDSDTRYSPESEQC	QVTISVDKSI	STAYLQWSSLKASDTAMYYCAR	100	
Vh5_DP-73__5-51_	IVPGDSDTRYSPESEQC	QVTISADKSI	STAYLQWSSLKASDTAMYYCAR ..		
7A4	RVCPGCGRGYSCHWGMDDV	WGQGTMTVTVSS	128 SEQ ID NO:112		
Vh5_DP-73__5-51_	.....	WGQGTMTVTVSS	JH3 SEQ ID NO:144		
7A4 V					
7A4	SSELTQDPAVSVALGQTVRITC	RGDSIRNNWVAS	WYQOKPGQAPVLVIY	50	
Vlambda3_DPL16__31_	SSELTQDPAVSVALGQTVRITC	QGDSTIRSNWVAS	WYQOKPGQAPVLVIY		
7A4	NNRBS	GIPDRFSGSSSGNTASLTITGAQAED	ADYYC NSRDSSGNHMY	100	
Vlambda3_DPL16__31_	NNRBS	GIPDRFSGSSSGNTASLTITGAQAED	ADYYC NSRDSSGNHMY		
7A4	GGTKLTVLGA	110 SEQ ID NO:113			
Vlambda3_DPL16__31_	GGTKLTVL..	JL3 SEQ ID NO:151			

# Figure 1d

7A5 VH			
7A5	GVQLVESGAEVKKPGESLTISKSGYNFF	NMMITG	WVRQMPGKGLEWMG II 50
Vh5_DP-73__5-51_	EVQLVQSGAEVKKPGESLKISKSGYSFT	SMWITG	WVRQMPGKGLEWMG II
7A5	IMPTIDSDTRMSPSFOG		QVTISVDKISISTAYLQWSSLKASDTAMYICAR SI 100
Vh5_DP-73__5-51_	IMPGDSIDTRMSPSFOG		QVTISADKISISTAYLQWSSLKASDTAMYICAR ..
7A5	RACPGGRCVSGIAGMDV		WGRGTLVTVSS 128 SEQ ID NO:114
Vh5_DP-73__5-51_	.....		WGRGTLVTVSS JH2 SEQ ID NO:145
7A5 VL			
7A5	SSELTQDPAVSVALGQTVRITC	QGDSTRSMVAS	WYQQKPGQAPVLVIY CK 50
Vlambda3_DPL16__31_	SSELTQDPAVSVALGQTVRITC	QGDSTRSMVAS	WYQQKPGQAPVLVIY CK
7A5	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	NSRDSGNEHW FG 100
Vlambda3_DPL16__31_	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	NSRDSGNEHW FG
7A5	GGTKLTVLGA 110	SEQ ID NO:115	
Vlambda3_DPL16__31_	GGTKLTVL.. JL3	SEQ ID NO:151	

# Figure 1e

## 7A6 VH

7A6	EVQLVQSGAEVKKPGESLTISKSGYNFF	NWMTG	WVRQMPGKGLEWMG	50
Vh5_DP-73__5-51_	EVQLVQSGAEVKKPGESLKISKSGYSFT	SNWMTG	WVRQMPGKGLEWMG	
7A6	QVTISYDKSISTAYLQWSSLKASDTAMYCAR	ST	100	
Vh5_DP-73__5-51_	QVTISADKSISTAYLQWSSLKASDTAMYCAR	..		
7A6	WGQGTLLTVSS	128	SEQ ID NO:116	
Vh5_DP-73__5-51_	WGQGTLLTVSS	JH5	SEQ ID NO:146	

## 7A6 VL

7A6	SSELTQDPAVSVALGQTVRITC	QGDSTRSNTIN	WEQQKPGQAPLLVY	50
Vlambda3_DPL16__31_	SSELTQDPAVSVALGQTVRITC	QGDSTRSNTIN	WEQQKPGQAPLVY	
7A6	GIPDRFGSSSGNTASLTITGAQAEDEADYYC	NSRDSSGNEHV	FG	100
Vlambda3_DPL16__31_	GIPDRFGSSSGNTASLTITGAQAEDEADYYC	NSRDSSGNEHV	FG	
7A6	GGTKLTVL	108	SEQ ID NO:117	
Vlambda3_DPL16__31_	GGTKLTVL	JL3	SEQ ID NO:151	

Figure 1f

8A1 VH				
8A1	EVQLVQSGAEVKKPESLTISKCKPGYNFF	NMWTC	WVRQMPGKGLEWMG	50
Vh5_DP-73__5-51_	EVQLVQSGAEVKKPESLKISKCKSGYSFT	SMWTC	WVRQMPGKGLEWMG	
8A1	IMPTDSDDTRVSPSFOG			100
Vh5_DP-73__5-51_	IMPTDSDDTRVSPSFOG			
8A1	RNGPGGRCVSCVAGMDV			
Vh5_DP-73__5-51_	WGQGTMTVTSS	128	SEQ ID NO:118	
	.....	WGQGTMTVTSS	SEQ ID NO:144	
8A1 VL				
8A1	SSELTQDPAVSVALGQTVRITC	QCDLSRSMVAS	WYQQKPGQAPVLVIY	50
Vlambda3_DPL16__31_	SSELTQDPAVSVALGQTVRITC	QCDLSRSMVAS	WYQQKPGQAPVLVIY	
8A1	NNRPS			
Vlambda3_DPL16__31_	NNRPS			
8A1	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC		NSRDSGNGHW	FG 100
Vlambda3_DPL16__31_	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC		NSRDSGNGHW	FG
8A1	GGTKLTVLGA	110	SEQ ID NO:119	
Vlambda3_DPL16__31_	GGTKLTVL..	JL3	SEQ ID NO:151	

# Figure 1g

9A2 VH			
9A2	QVQLVQSGAEVRKPGASVKVCKTSGYTFR	NVDIN	WVRQAPGQGLEWMG R 50
Vh1_DP-14__1-18_	QVQLVQSGAEVKKPGASVKVCKASGYTFT	SYGIS	WVRQAPGQGLEWMG W
9A2	TSCHVGNTHDAOKFOG	RETMTKDTSTSTAYMELRSLTFDDTA	VYYCAR S 100
Vh1_DP-14__1-18_	TSAVNGNTNVAOKLOG	RVTMTTDTSTSTAYMELRSLRSDDTA	VYYCAR ..
9A2	WGRGTLVTVSS	116	SEQ ID NO:120
Vh1_DP-14__1-18_	..... WGRGTLVTVSS	JH2	SEQ ID NO:147
9A2 VL			
9A2	NFMLTQPHSVSESPGKTVTISC	TRSSGSA SNVAO	WYQORPGSSPTTVIF 50
Vlambda6_6a	NFMLTQPHSVSESPGKTVTISC	TRSSGSA SNVAO	WYQORPGSSPTTVIY
9A2	EDNRRPS	GVPDRFSGSIDTSSNSASLTISGLKTE	DEADYYC QSPDSTNLV 100
Vlambda6_6a	EDNORPS	GVPDRFSGSIDSSNSASLTISGLKTE	DEADYYC QSPDSSNLV
9A2	FGGGTKLTVLGA	113	SEQ ID NO:121
Vlambda6_6a	FGGGTKLTVL..	JL2/JL3	SEQ ID NO:152

# Figure 1h

11A1 VH			
11A1	EVQLVESGGGVVQPGRSLRLSCAASGFTFS	DEAME	WVRQIPGKGLEWLS 50
Vh3_DP-50__3-33_	QVQLVESGGGVVQPGRSLRLSCAASGFTFS	SMGME	WVRQAPGKGLEWVA *
11A1	LRHDCSTAVAVAGSVKGC		
Vh3_DP-50__3-33_	LHWDCSNKAVADSVMKGC		
	RFTISRDNRSNTVYVLQMNSLRAEDTATYYCVT	CS	100
	RFTISRDNRSKNTLYLQMNSLRAEDTAVYYCAR..		
11A1	CSGCPHAFEPV		
Vh3_DP-50__3-33_	WGKGLTVTVSS	121 SEQ ID NO:122	
	WGQGLTVTVSS	JH1/JH4/JH5	SEQ ID NO:148
	.....		
* Vernier residue			
11A1 VL			
11A1	SYVLTQPPSASGTPGQRTVISC	SGSNSNIGCTATVFN	WFQQLPGTAPKLLIY 50
Vlambda1_DPL2__1c_	QSVLTQPPSASGTPGQRTVISC	SGSSSNIGCSNFTVFN	WYQQLPGTAPKLLIY
11A1	SNNORPS		
Vlambda1_DPL2__1c_	GVPDRFSGSKGTSASLAISGLQSEDEADYYC		
	SNNORPS		
	GVPDRFSGSKGTSASLAISGLQSEDEADYYC		
11A1	FGGGTKVTVLGA	112 SEQ ID NO:123	
Vlambda1_DPL2__1c_	FGIGTKVTVL	JL1	SEQ ID NO:154



Figure 1i

11A2 VH				
11A2	EVQLLESGGGLVQPGGSLRLS	CAASGFTFS	SNVAMS	WVRQAPGKGLEWVS
Vh3_DP-47_3-23_	EVQLLESGGGLVQPGGSLRLS	CAASGFTFS	SNVAMS	WVRQAPGKGLEWVS
11A2	TSVSGSGSTAVADSVKGC			
Vh3_DP-47_3-23_	TSVSGSGSTAVADSVKGC			
11A2	WGQGTMTVTVSS	127	SEQ ID NO:124	
Vh3_DP-47_3-23_	WGQGTMTVTVSS	JH3	SEQ ID NO:149	
11A2 VL				
11A2	SSELTQDPDVSMALGQTVTISC	RGDSLSKRFVMS	WYHQKPGQAPVLVFI	CK
Vlambda3_DPL16_31_	SSELTQDPAVSV	ALGQTVRIIC	QGDSTERSNVAS	WYQQKPGQAPVLVIY
11A2	ENRPS	GIPDRFSGDSGDTASLTITGAQAEDEGDIYC	HTQDTSARQW	FC
Vlambda3_DPL16_31_	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYIC	NSRDSSGSHW	FC
11A2	SGTKVTVLGA	110	SEQ ID NO:125	
Vlambda3_DPL16_31_	TGTKVTVL..	JL1	SEQ ID NO:153	

Figure 1j

11A3 VH

Query  
Vh1\_DP-14\_1-18\_ EVQLVQSGAEVKKPGASVKVSCKASGYST **NYGLN** WVRQAPGGLEWMG **W** 50  
QVQLVQSGAEVKKPGASVKVSCKASGYTFT **SYGLS** WVRQAPGGLEWMG **W**

Query  
Vh1\_DP-14\_1-18\_ **ISPYTGTGNTNNAOKFOG** RVTMTTDKSTSTAYMDLRSLRSDDDTAVYYCAR **ELI** 100  
**ISANNGNTNNAOKILOG** RVTMTTDISTSTAYMELRSLRSDDDTAVYYCAR ..

Query  
Vh1\_DP-14\_1-18\_ **FSHCTGGSCMPEDS** WGRGTLTVSS 125 SEQ ID NO:126  
..... WGRGTLTVSS JH2 SEQ ID NO:147

11A3 VL

Query  
Vlambda3\_DPL16\_31\_ SSELTDQDPAVSVALGQTVRITC **QCDSTRNWAS** WYQQKPGQAPLLVMF **GK** 50  
SSELTDQDPAVSVALGQTVRITC **QCDSTPSVWAS** WYQQKPGQAPVLVIY **GK**

Query  
Vlambda3\_DPL16\_31\_ **NNRPS** EIPGRFSGSSSGNTASLTITGAQAEEADYYC **NSRDRNSHOWV** FG 100  
**NNRPS** GIPDRFSGSSSGNTASLTITGAQAEEADYYC **NSRDSGNEHW** FG

Query  
Vlambda3\_DPL16\_31\_ GGKLTVLGA 110 SEQ ID NO:127  
GGKLTVL.. JL3 SEQ ID NO:151

# Figure 1k

11A4 VH

11A4  
Vh3\_DP-47\_\_3-23\_ EVQLLESGGGLVQPGGSLRLSCAASGFTFS **SWAMS** WVRQAPGKGLEWVS **A** 50  
EVQLLESGGGLVQPGGSLRLSCAASGFTFS **SWAMS** WVRQAPGKGLEWVS **A**

11A4  
Vh3\_DP-47\_\_3-23\_ **TSGSGGSTAYADSVK** RFTISRDN SKNTLYLQMNSLRAEDTAVYYC **SP** 100  
**TSGSGGSTAYADSVK** RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK ..

11A4  
Vh3\_DP-47\_\_3-23\_ **YSRRWYSEDP** WGQGTMTVTVSS 121 SEQ ID NO:128  
..... WGQGTMTVTVSS JH3 SEQ ID NO:149

\* Vernier residue

11A4 VL

11A4  
Vlambda3\_DPL23\_\_3r\_ SYELTQPPSVSVSPGQTATITC **SGDDYCNKAW** WYQQKPGQSPVLVIY **OD** 50  
SYELTQPPSVSVSPGQTASITC **SGDKTGDKNVAC** WYQQKPGQSPVLVIY **OD**

11A4  
Vlambda3\_DPL23\_\_3r\_ **TKRPS** GIPERFSGNSGNIATLTISGTQAVDEADYYC **QVMDTGTW** FGCG 100  
**SKRPS** GIPERFSGNSGNTATLTISGTQAMDEADYYC **QAWDSSTA** FGCG

11A4  
Vlambda3\_DPL23\_\_3r\_ TKLTVLGA 108 SEQ ID NO:129  
TKLTVL.. JL3 SEQ ID NO:155

# Figure 11

11A5 VH					
Query					
Vh1_DP-14__1-18__					50
	QVQLVQSGAEVKKPGASVKVSCKASGYST	NYGYN	WVRQAPGQGLEWMG		
	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYGTS	WVRQAPGQGLEWMG		
Query					100
Vh1_DP-14__1-18__					
	RVMTMTDKSTSTAYMDLRLSLRSDDDTAVYYCAR	ET			
	RVMTMTDTSTSTAYMELRLSLRSDDDTAVYYCAR	..			
Query					
Vh1_DP-14__1-18__					
	WGKGLTVTVSS	125	SEQ ID NO:130		
	WGQGLTVTVSS	JH1	SEQ ID NO:145		
11A5 VL					
Query					50
Vlambda3_DPL16__31__					
	SSELTQDPAVSVALGQTVRITC	QCDSTRSVAAS	WYQKPGQAPVLVIY	CK	
	SSELTQDPAVSVALGQTVRITC	QCDSTRSVAAS	WYQKPGQAPVLVIY	CK	
Query					100
Vlambda3_DPL16__31__					
	GIPDRFSGSSSGNTASLTITGAQAEADYYC	NSRDSGNNHHW		F	
	GIPDRFSGSSSGNTASLTITGAQAEADYYC	NSRDSGNNH...		F	
Query					
Vlambda3_DPL16__31__					
	GGGTKVTVLGA	111	SEQ ID NO:131		
	GGGTKLTVL..	JL3	SEQ ID NO:151		

Figure 1m

11A11 VH		
11A11	QVQLVESGGGLVKPGGSLRLSCAASGFTFS	SHTEMN WVRQAQCKGLEWVS 50
Vh3_DP-77_3-21_	EVQLVESGGGLVKPGGSLRLSCAASGFTFS	SYSMIN WVRQAPGCKGLEWVS 50
11A11	TSGSGRTAVYSDSVKGE	RFTISRDAAKNSLYLQMNNLRAEDTAVYYCTR AK 100
Vh3_DP-77_3-21_	TSSSSSNVAADSVKGE	RFTISRDNAKNSLYLQMNLSLRAEDTAVYYCAR ..
11A11	FGDMLHDS	WGQGLTVTVSS 119 SEQ ID NO:132
Vh3_DP-77_3-21_	.....	WGQGLTVTVSS JH1/JH4/JH5 SEQ ID NO:150
11A11 VL		
11A11	NFMLTQPHSVSQSPGKTVTISC	TPSSGRTFASNEVQ WYQORPGSAPTIVY 50
Vlambda6_6a	NFMLTQPHSVSESPPGKTVTISC	TPSSGRTFASNEVQ WYQORPGSAPTIVY
11A11	EDNRRLPS	GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC OSMDARNQV 100
Vlambda6_6a	EDNORPS	GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC OSMDSSN..
11A11	FGTGTKVTVLGA 112	SEQ ID NO:133
Vlambda6_6a	FGTGTKVTVL.. JL1	SEQ ID NO:156

# Figure 1n

11A12 VH			
11A12	EVQLLESGGGLVQPGGSLRLS	CAASGFTFS	SVAMS
Vh3_DP-47_3-23_	EVQLLESGGGLVQPGGSLRLS	CAASGFTFS	SVAMS
11A12	WVRQAPGKGLEWVS		50
Vh3_DP-47_3-23_	WVRQAPGKGLEWVS		50
11A12	RFTISRDN	SKNTLYLQMN	SLRAEDTAVYYCAR
Vh3_DP-47_3-23_	RFTISRDN	SKNTLYLQMN	SLRAEDTAVYYCAR
11A12	WGRGTMVT	VSS	123
Vh3_DP-47_3-23_	WGRGTMVT	VSS	123
11A12	SEQ ID NO:134		
Vh3_DP-47_3-23_	SEQ ID NO:149		
* Vernier residue			
11A12 VL			
11A12	QAVLTQ	PPSVSGAPQ	RV
Vlambdal_DPL8_1e_	QAVLTQ	PPSVSGAPQ	RV
11A12	WYQQFPGTAPKLLI		50
Vlambdal_DPL8_1e_	WYQQFPGTAPKLLI		50
11A12	Y GNTNRP	GV	PD
Vlambdal_DPL8_1e_	Y GNTNRP	GV	PD
11A12	QSVYD	SGS	100
Vlambdal_DPL8_1e_	QSVYD	SGS	100
Query	FGG	GTKVT	VLGA
Vlambdal_DPL8_1e_	FGG	GTKVT	VLGA

[illegible]

# Figure 1p

11A7 VH			
11A7			
Vh1_DP-14__1-18__	EVQLVQSGAEVKKPGASVKVSCKASGYST	NYGLD	WVRQAPQGLEWMG 50
	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SWGTS	WVRQAPQGLEWMG
11A7			
Vh1_DP-14__1-18__	ITSPYTCMTNVAQKFOG		RVTMTTDKSTSTAYMDLRLSRSDDTAVYYCAR PH 100
	TSANNGNHNVAQKFOG		RVTMTTDISTSTAYMELRLSRSDDTAVYYCAR ..
11A7			
Vh1_DP-14__1-18__	FSHCICGSCWPFDS	WGRGTMVTVSS 125	SEQ ID NO:136
	.....	WGRGTLVTVSS JH2	SEQ ID NO:147
11A7 VL			
11A7			
Vlambda3_DPL16__31__	SSELTQDPAVSVALGQTVRITC	QCDSEKSNVAS	WYQQKPGQAPVLVIY GK 50
	SSELTQDPAVSVALGQTVRITC	QCDSEKSNVAS	WYQQKPGQAPVLVIY GK
11A7			
Vlambda3_DPL16__31__	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	NSRDSGSGNHNWV 100
	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	NSRDSGSGNEL. 100
11A7			
Vlambda3_DPL16__31__	FGGGTKVTVLGA 112	SEQ ID NO:137	
	FGGGTKLTVL.. JL3	SEQ ID NO:151	



# Figure 1q

12A2 VH					
12A2					
Vh1_DP-14__1-18__					
	EVQLVQSGAEVKKPGASVKVSCKASGYST	NYGLN	WVRQAPGQGLEWMG	W	50
	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYGTS	WVRQAPGQGLEWMG	W	
12A2					
Vh1_DP-14__1-18__					
	TSPTVTCMTNVAOKLEOG		RVTMTTDKSTSTAYMDLRLSLRSDDTAVYYCAR	EL	100
	TSAVNGNTNVAOKLEOG		RVTMTTDTSTSTAYMELRLSLRSDDTAVYYCAR		
12A2					
Vh1_DP-14__1-18__					
	FSHCICGSCYEPFDS		WGQGLVTVSS	125	SEQ ID NO:138
	.....		WGQGLVTVSS	JH1	SEQ ID NO:147
12A2 VL					
12A2					
Vlambda3_DPL16__31__					
	SSELTQDPAVSVALGQTVRITC	QGDSLRNVAAS	WYQKPGQAPLLVMF	GK	50
	SSELTQDPAVSVALGQTVRITC	QGDSLRNVAAS	WYQKPGQAPLVII	GK	
12A2					
Vlambda3_DPL16__31__					
	NNRPS	EIPGRFSGSSSGNTASLTITGAQAEDADYYC	NSRDSNSHOWV	FG	100
	NNRPS	GIPDRFSGSSSGNTASLTITGAQAEDADYYC	NSRDSNSGNH	FG	
12A2					
Vlambda3_DPL16__31__					
	GGTKLTVLGA	110	SEQ ID NO:139		
	GGTKLTVL..	JL3	SEQ ID NO:151		

Figure 1r

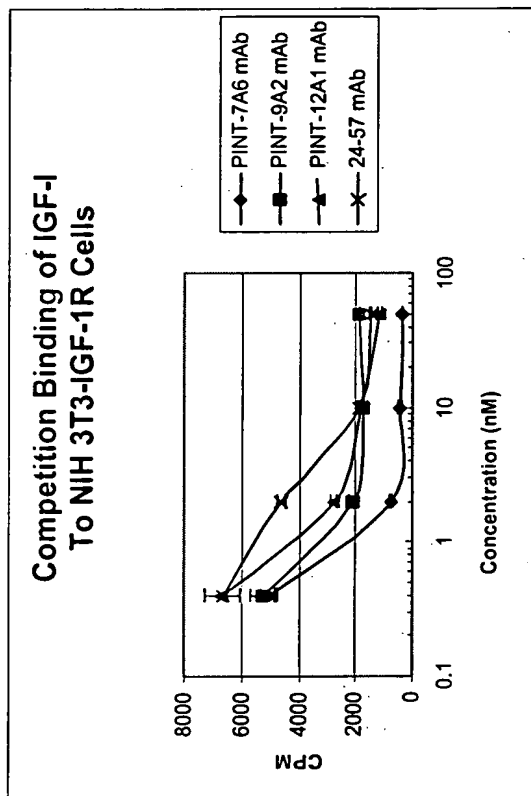
12A3 VH					
12A3					
Vh1_DP-14_1-18_					
	QVQLVQSGAEVKKPGASVKVSCKASGYST	NYGLEN	WVRQAPGQGLEWMG	W	50
	QVQLVQSGAEVKKPGASVKVSCKASGYTFT	SYGHS	WVRQAPGQGLEWMG	W	
12A3					
Vh1_DP-14_1-18_					
	TSPMTGNTNVAOKFOG		RVTMTSDKSTSTAYMDLRLSLRSDDTAIYYCAR	ETI	100
	TSVANGNTNVAOKFOG		RVTMTTDTSTSTAYMELRLSLRSDDTAVYYCAR		
12A3					
Vh1_DP-14_1-18_					
	FSHGSGCSGVPEDY		WGQGLTVTVSS	125	SEQ ID NO:140
	.....		WGQGLTVTVSS	JH1	SEQ ID NO:147
12A3 VL					
12A3					
Vlambda3_DPL16_31_					
	SSELTQDPAPVSVVALGQTVRITC	QGDSTRSWAS	WYQQKPGQAPLLVIY	GR	50
	SSELTQDPAPVSVVALGQTVRITC	QGDSTRSWAS	WYQQKPGQAPLLVIY	GK	
12A3					
Vlambda3_DPL16_31_					
	NNRPS		GIPDRFSGSSSGNTASLTITGAQAEDADYYC	NSRDSSTNHGNNW	100
	NNRPS		GIPDRFSGSSSGNTASLTITGAQAEDADYYC	NSRDSSTNHGNNW	
12A3					
Vlambda3_DPL16_31_					
	FGGGTQLTVLSA	112	SEQ ID NO:141		
	FGGGTQLTVL..	JL7	SEQ ID NO:157		

# Figure 1s

12A4	VH				
12A4					
Vh1_DP-14__1-18__		QVQLVQSGAEVKKPGASVKVCKASGYST	WVRQAPGQGLEWMG	W	50
		QVQLVQSGAEVKKPGASVKVCKASGYTFT	WVRQAPGQGLEWMG	W	
12A4					
Vh1_DP-14__1-18__		RVMTMTDKSTSTAYMDLRLSLRSDDTAVYYCAR	ET	100	
		RVMTMTDTSTSTAYMELRLSLRSDDTAVYYCAR			
12A4					
Vh1_DP-14__1-18__		WGRGTMVTVSS	125	SEQ ID NO:142	
		WGRGTLVTVSS	JH2	SEQ ID NO:146	
		.....			
12A4	VL				
12A4					
Vlambda3_DPL16__31__		SSELTQDPAVSVALGQTVRITC	WYQKPGQAPVLVIY	CK	50
		SSELTQDPAVSVALGQTVRITC	WYQKPGQAPVLVIY	CK	
12A4					
Vlambda3_DPL16__31__		GIPDRFSGSSSGNTASLTITGAQAEADYYC	NSRDSSGNINMW	F	100
		GIPDRFSGSSSGNTASLTITGAQAEADYYC	NSRDSSGNINMW	F	
12A4					
Vlambda3_DPL16__31__		GGGTQLTVLSA	111	SEQ ID NO:143	
		GGGTQLTVL..	JL7	SEQ ID NO:157	

# Figure 2

a



b

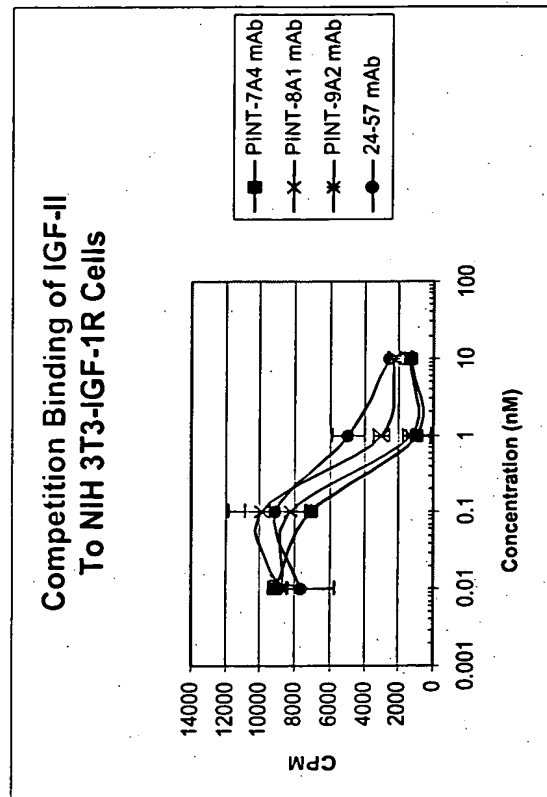


Figure 3

IGF-1R mAbs effect on insulin / receptor binding

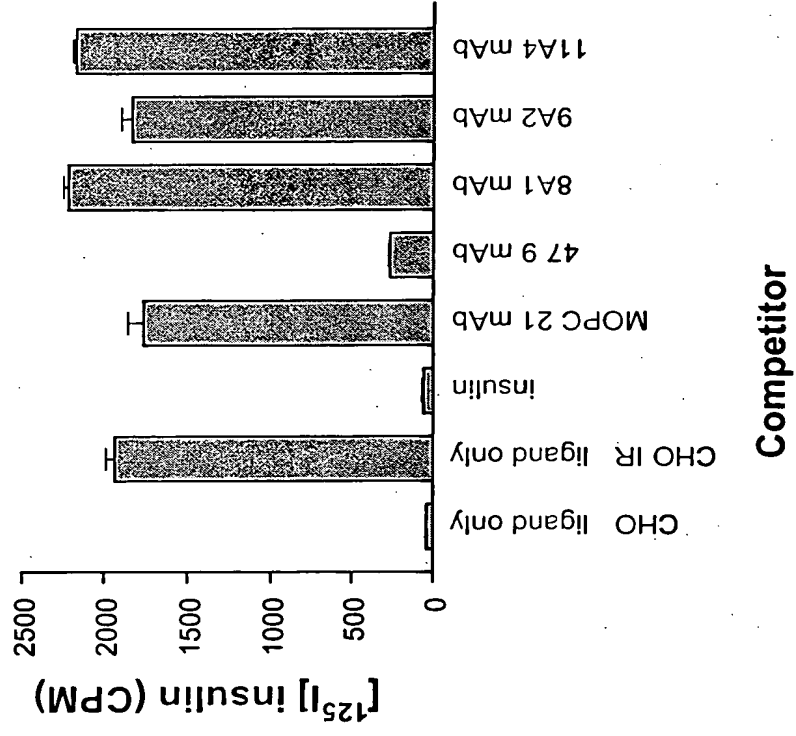


Figure 4

IGF-1R mAbs effect on insulin receptor activation

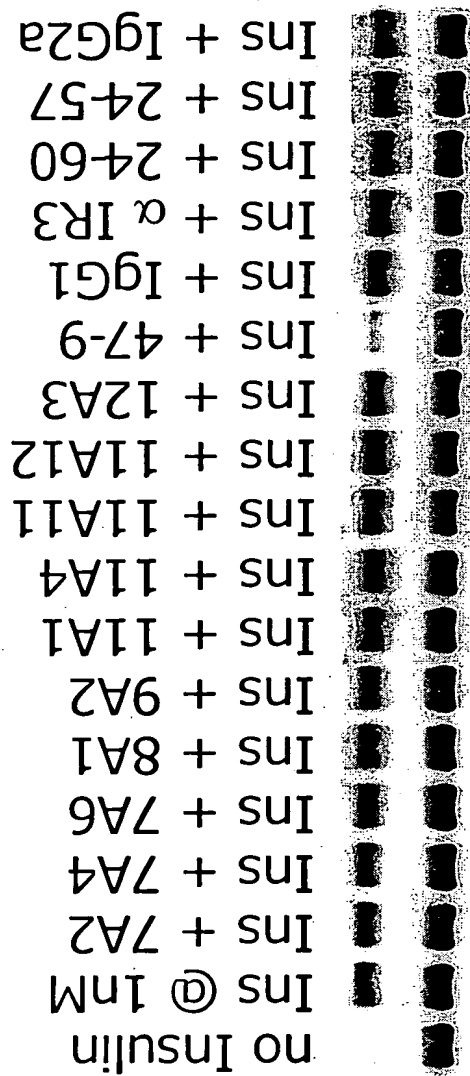


Figure 5

Saturable and specific binding  
of IGF-1R mAbs - 3T3 hu-IGF1R  
fibroblasts

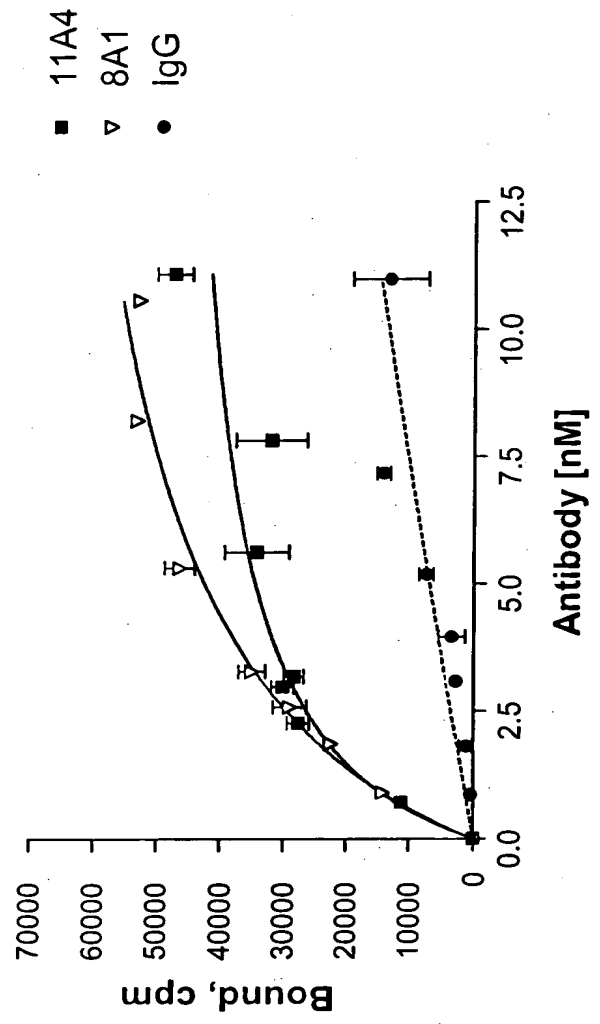
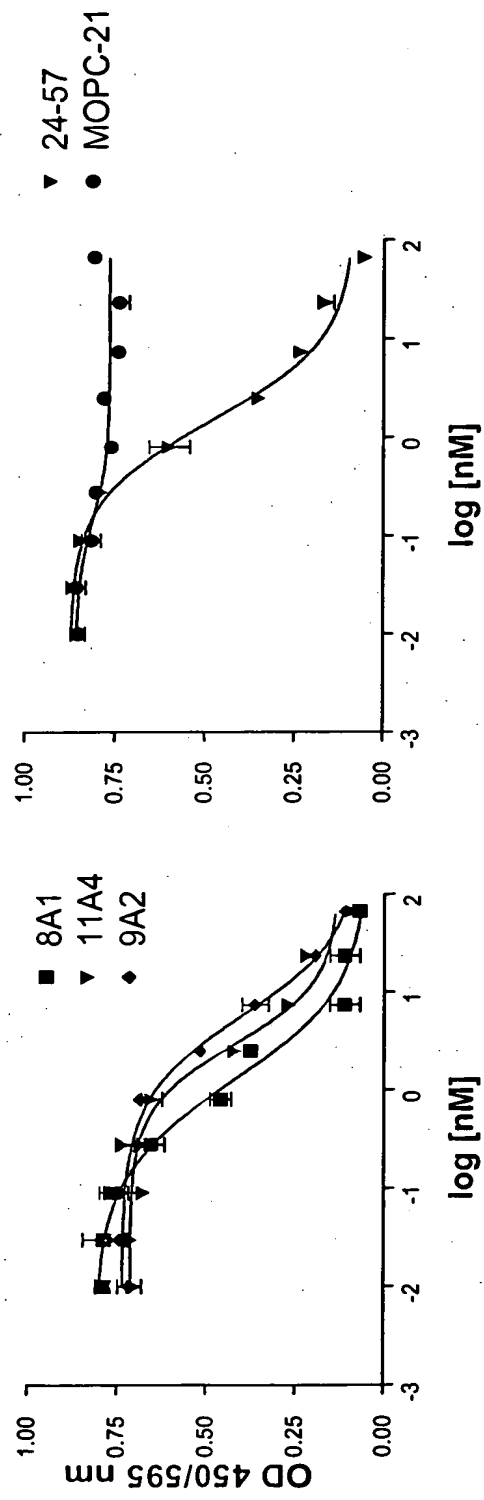


Figure 6

IGF-1R mAbs block cell proliferation - BrdU

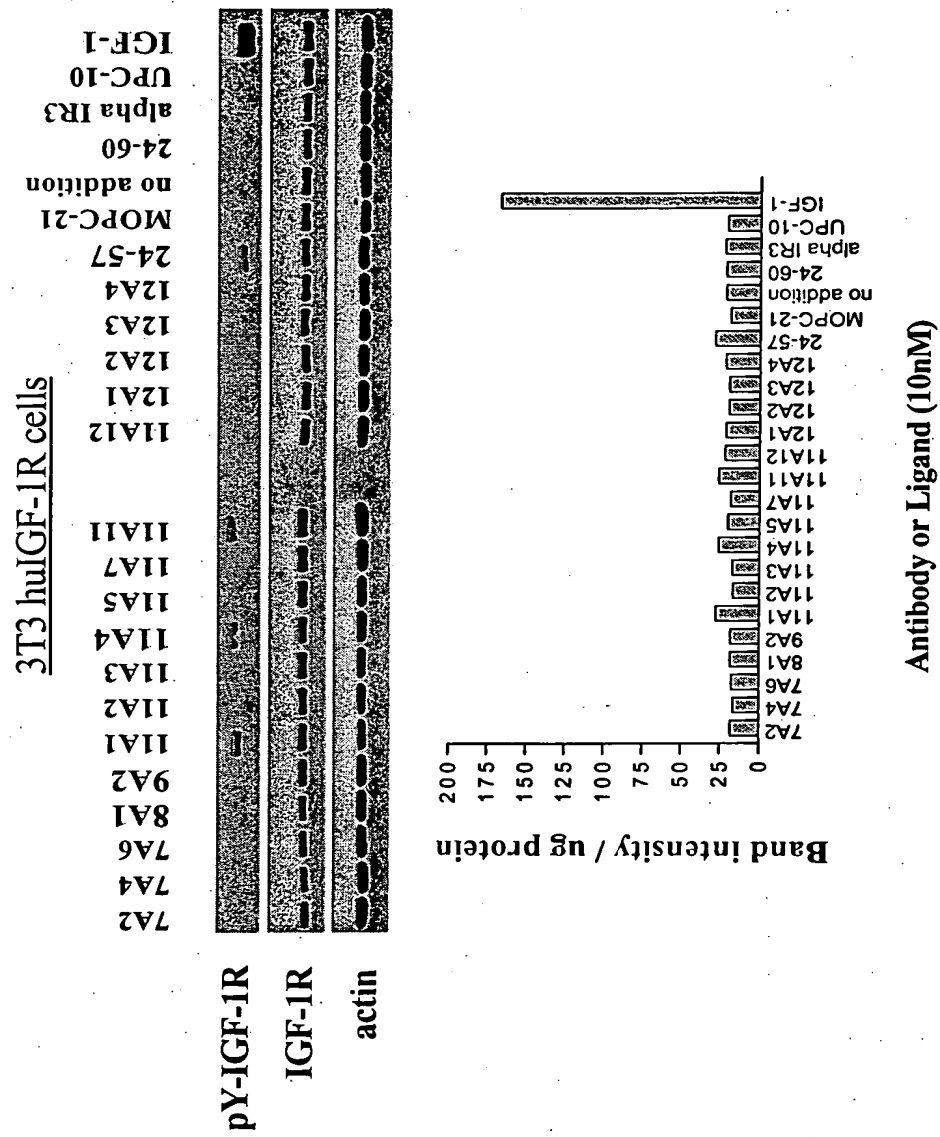
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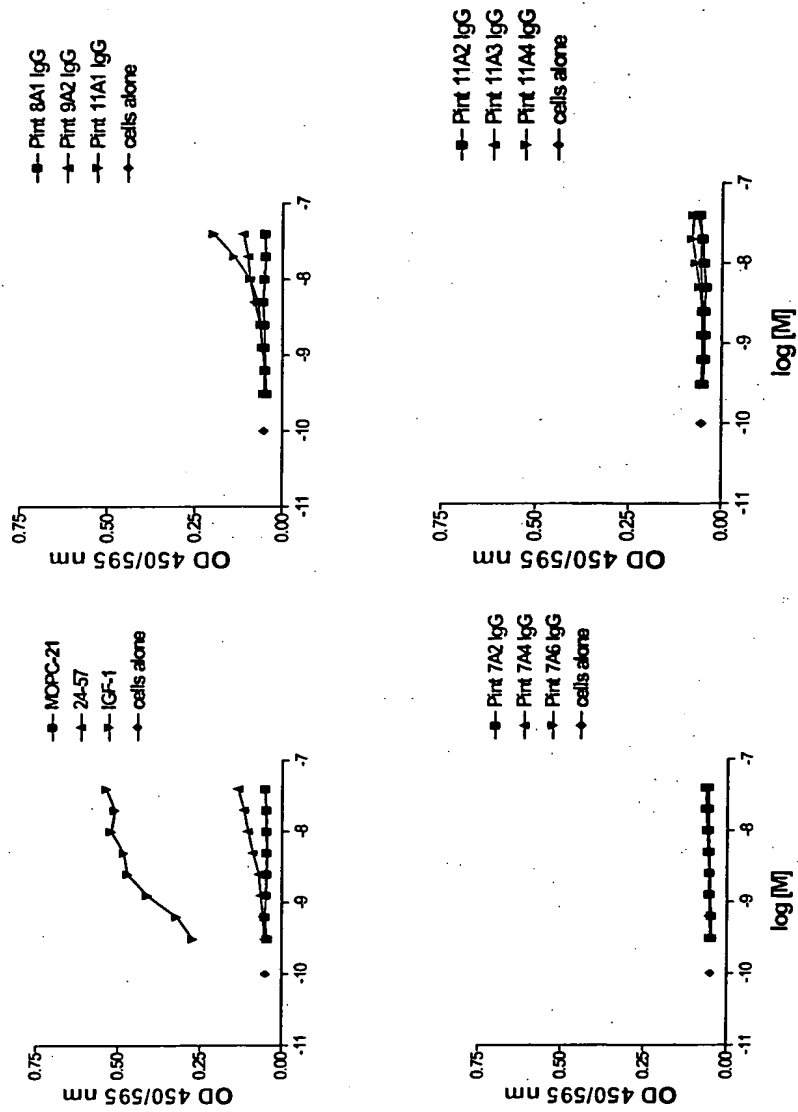
# Figure 7

IGF-1R mAbs – receptor phosphorylation – Western blotting



# Figure 8

## IGF-1R mAbs – receptor phosphorylation – ELISA



# Figure 9

IGF-1R mAbs – blockade of IGF-driven receptor  
tyrosine phosphorylation – ELISA

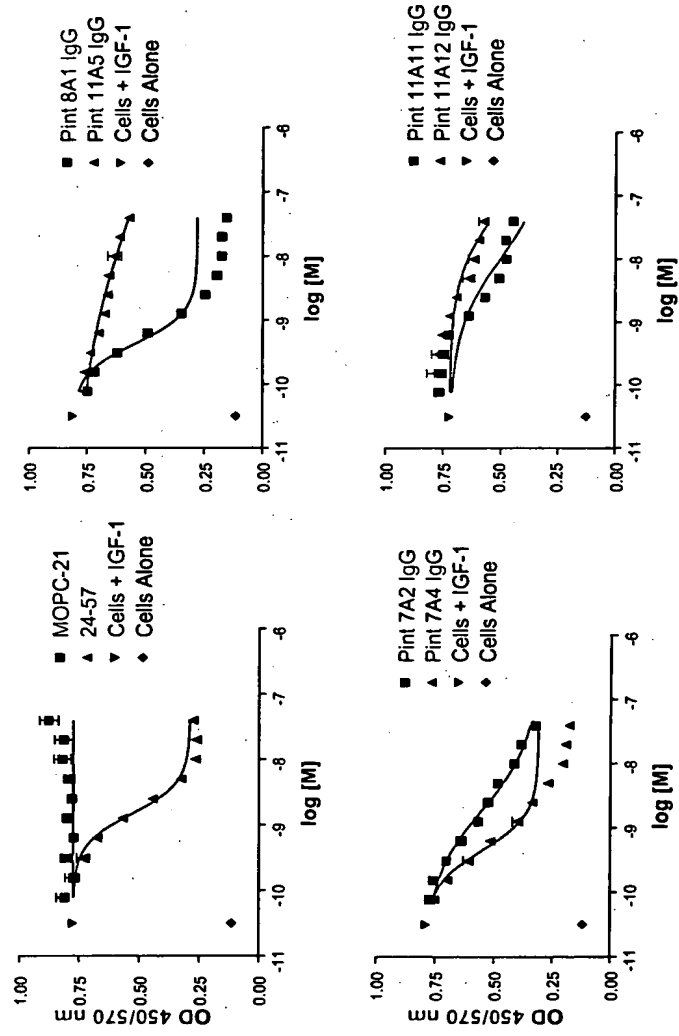
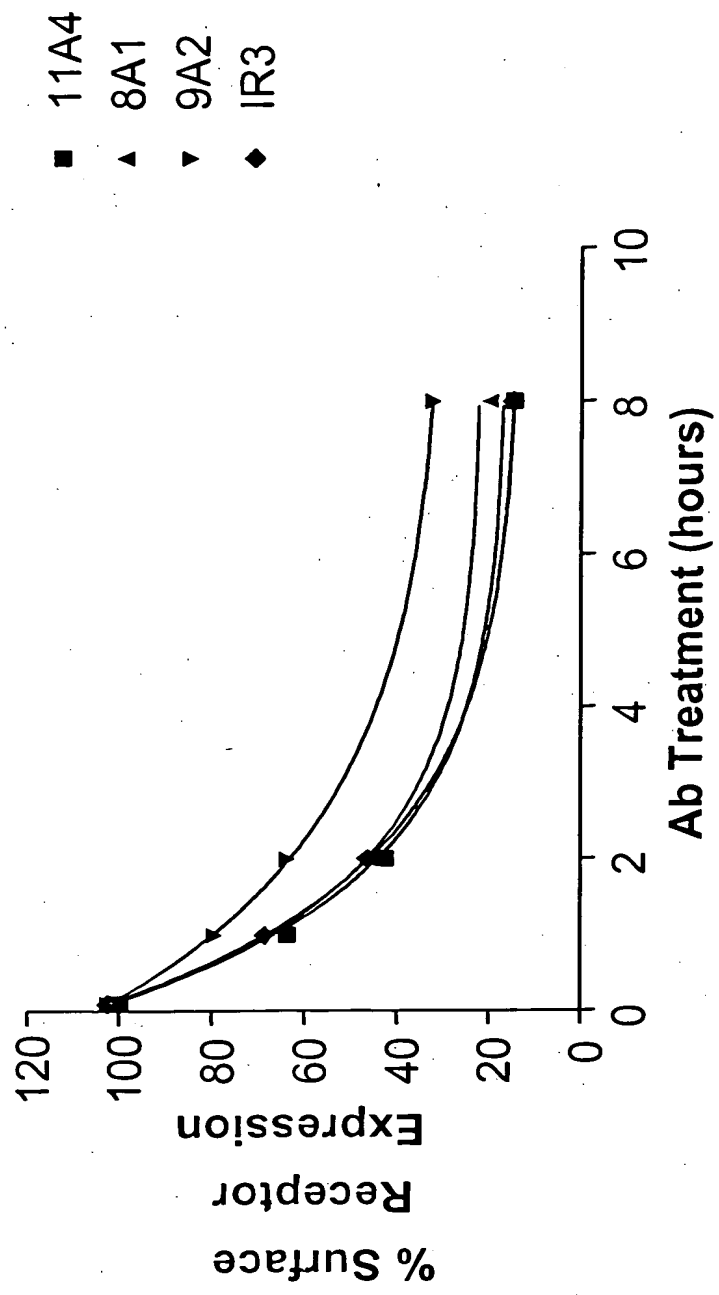


Figure 10



### Time course of IGF-1R loss by IGF-1R mAbs, but not w/ IGF-1 – NIH 3T3 hu-IGF-1R cells

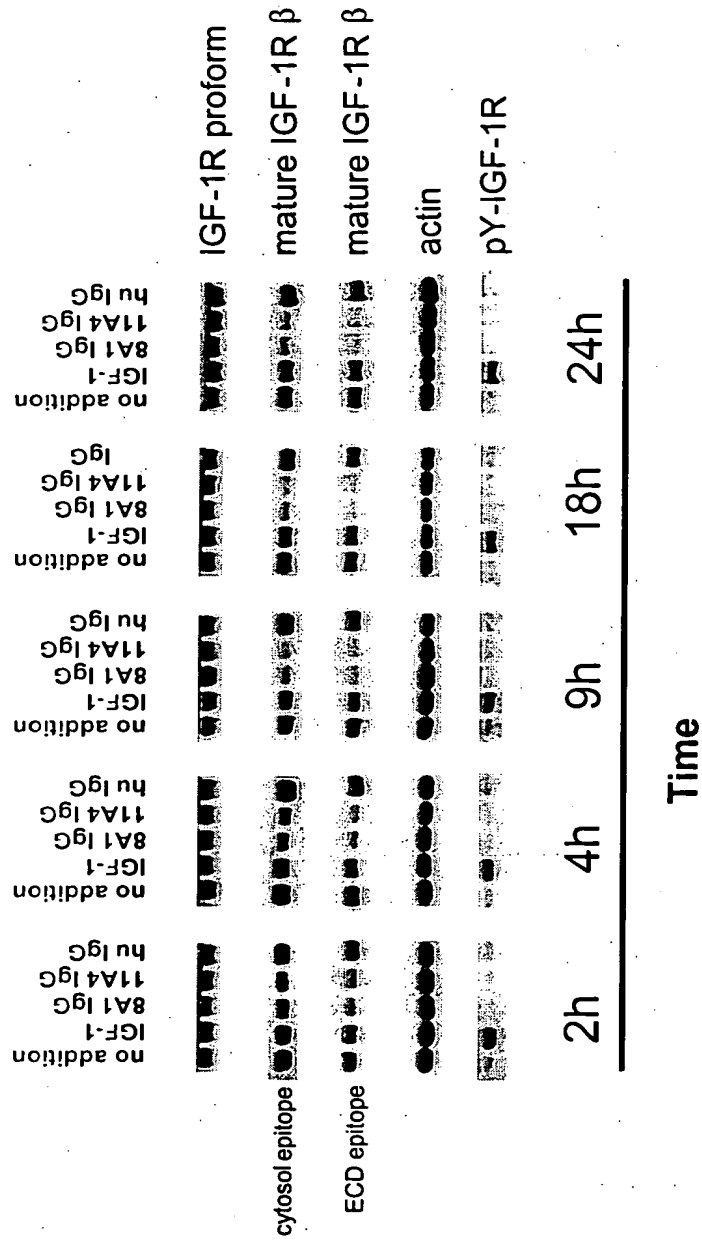


Figure 12

IGF-1R down-regulation *in vitro*  
by IGF-1R mAbs – NIH 3T3 hu-IGF-1R cells

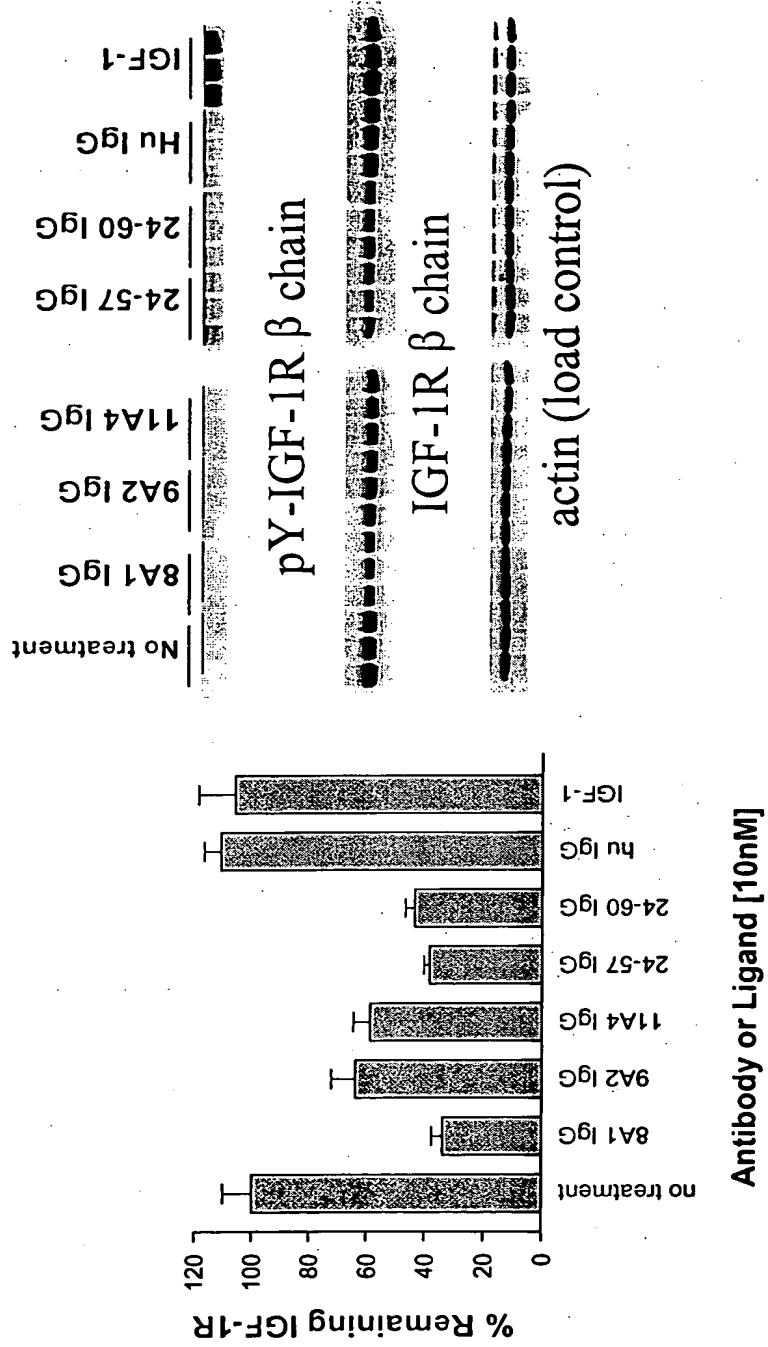
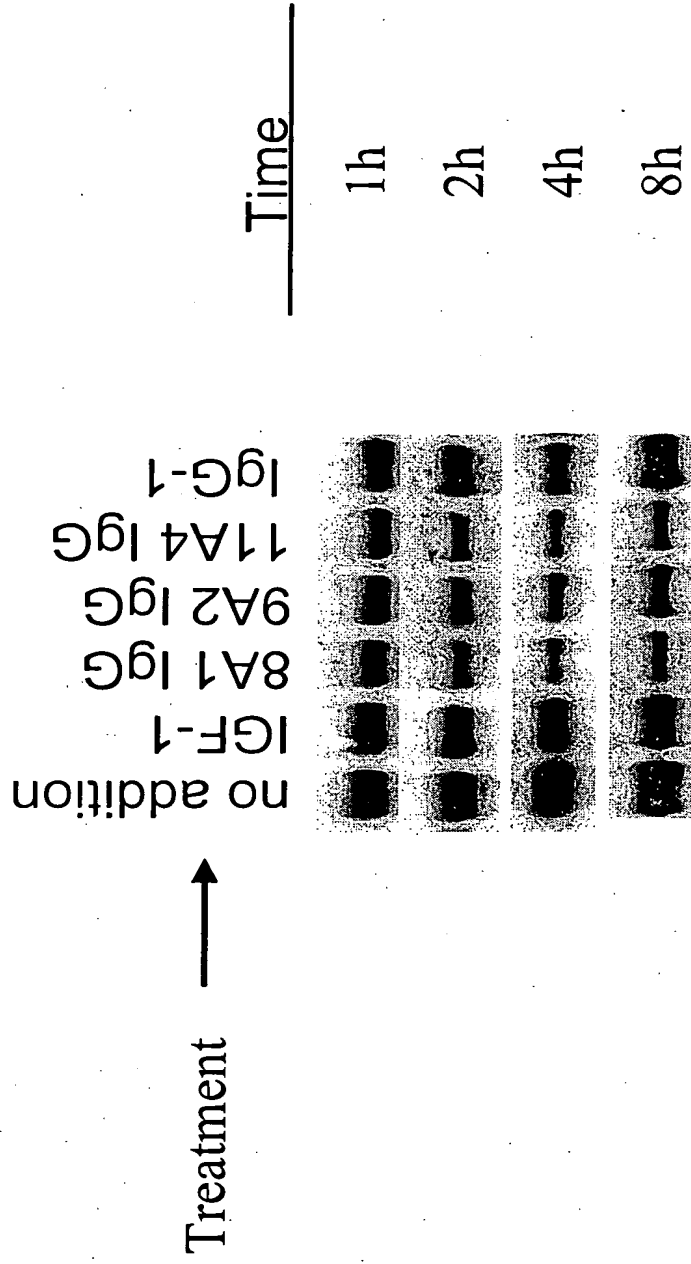
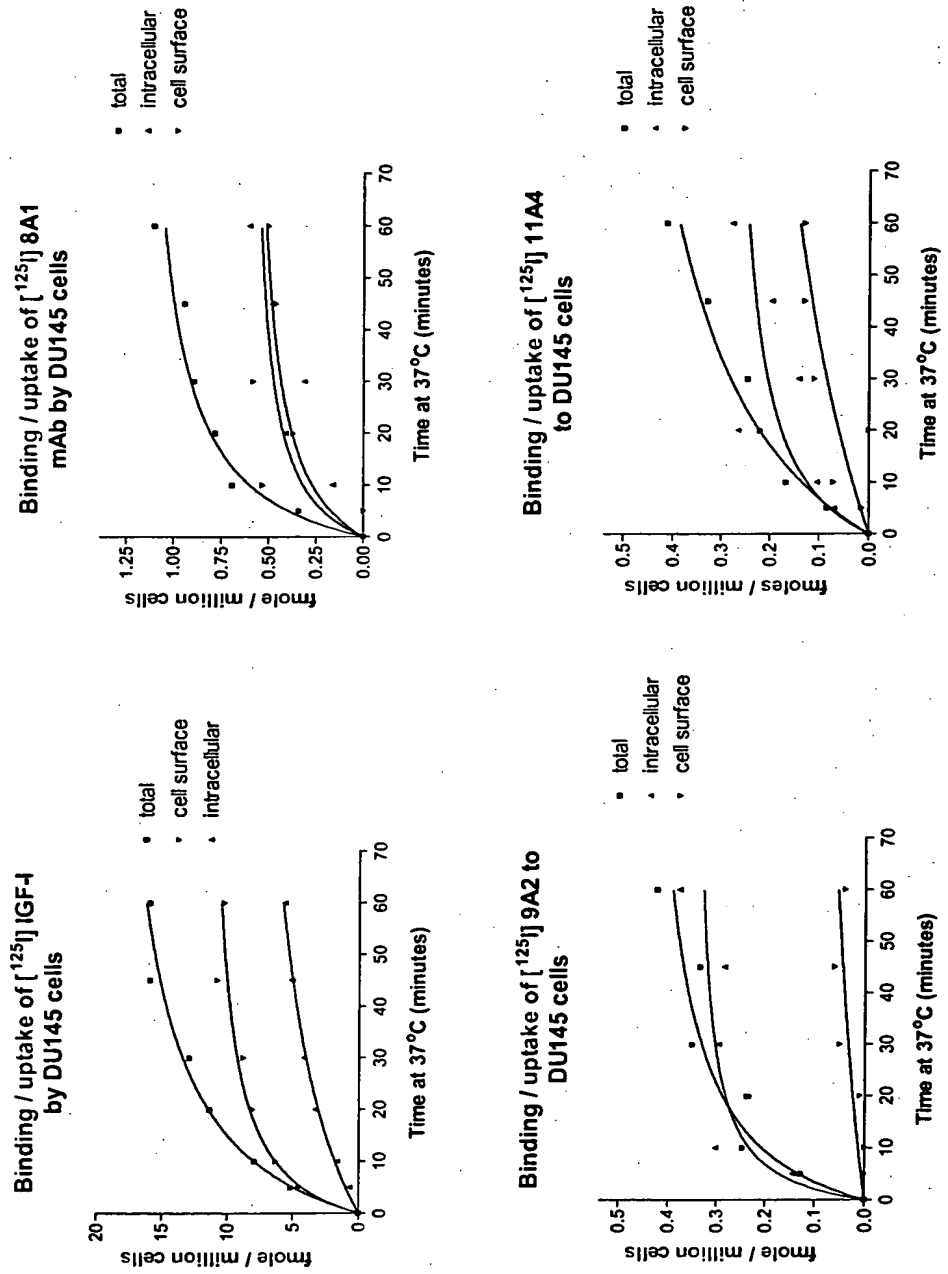


Figure 13

IGF-1R down-regulation *in vitro* by  
IGF-1R mAbs – A549 NSCLC cells



# Figure 14





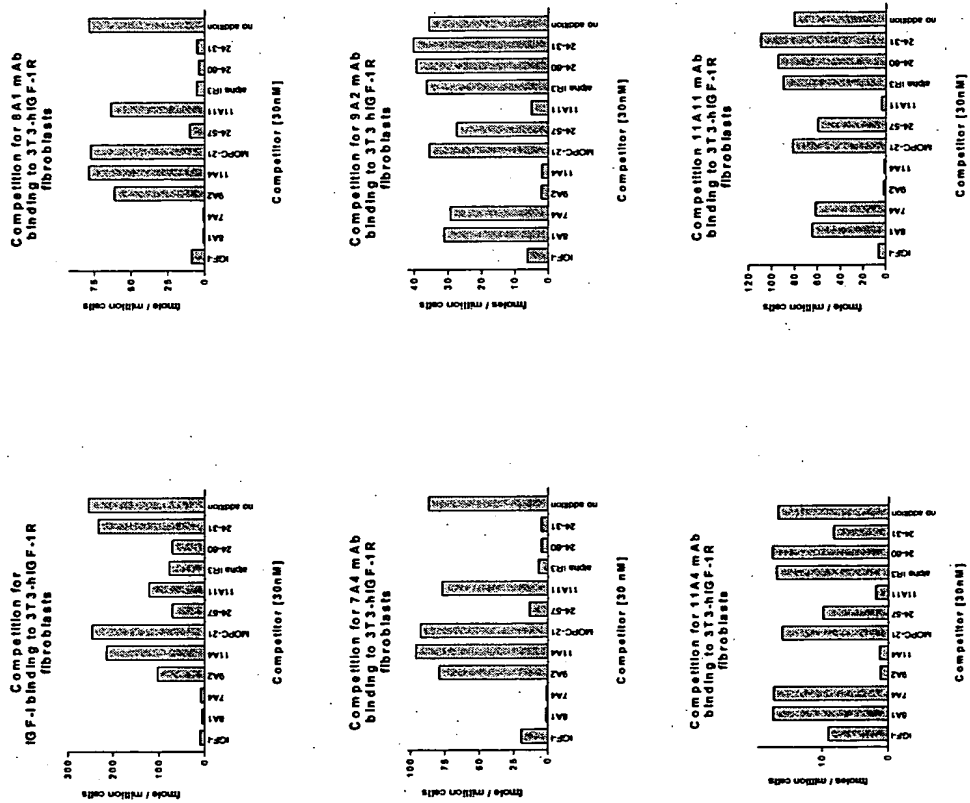


Figure 15

Figure 16

# Distinct epitopes for mAbs

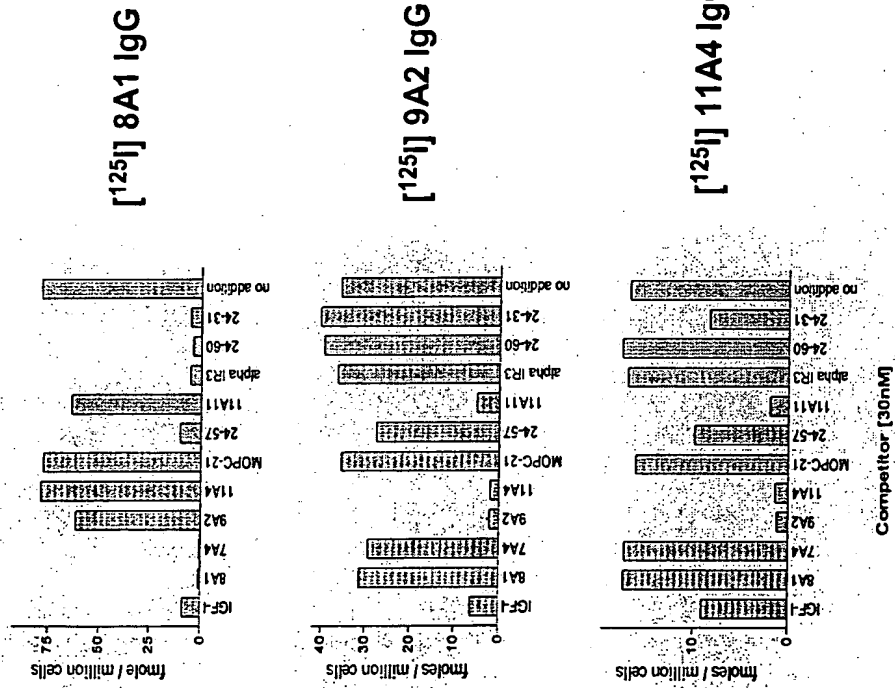


Figure 17

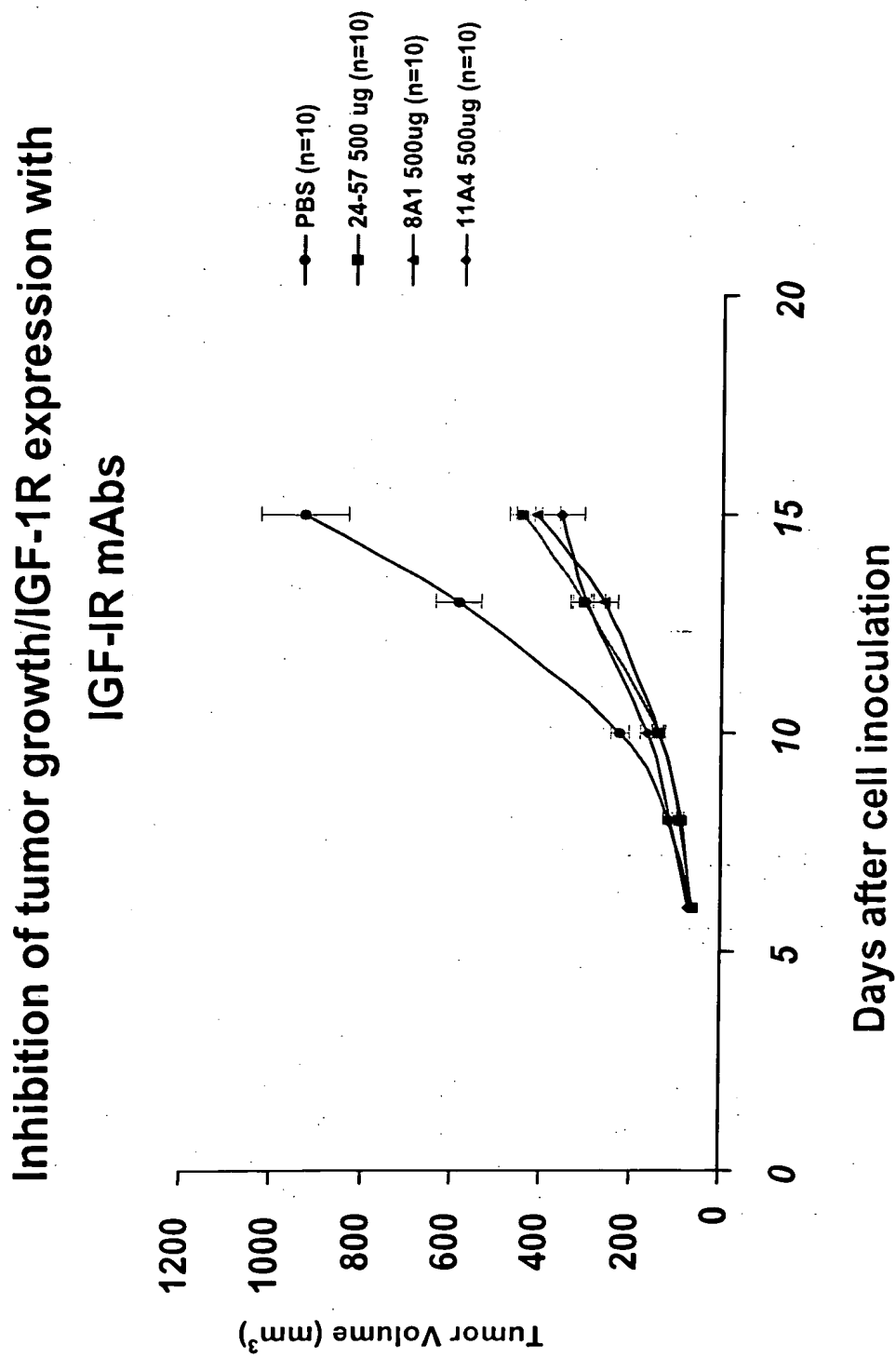


Figure 18

Inhibition of tumor growth/IgG-IR expression  
with IGF-IR 8A1 IgG

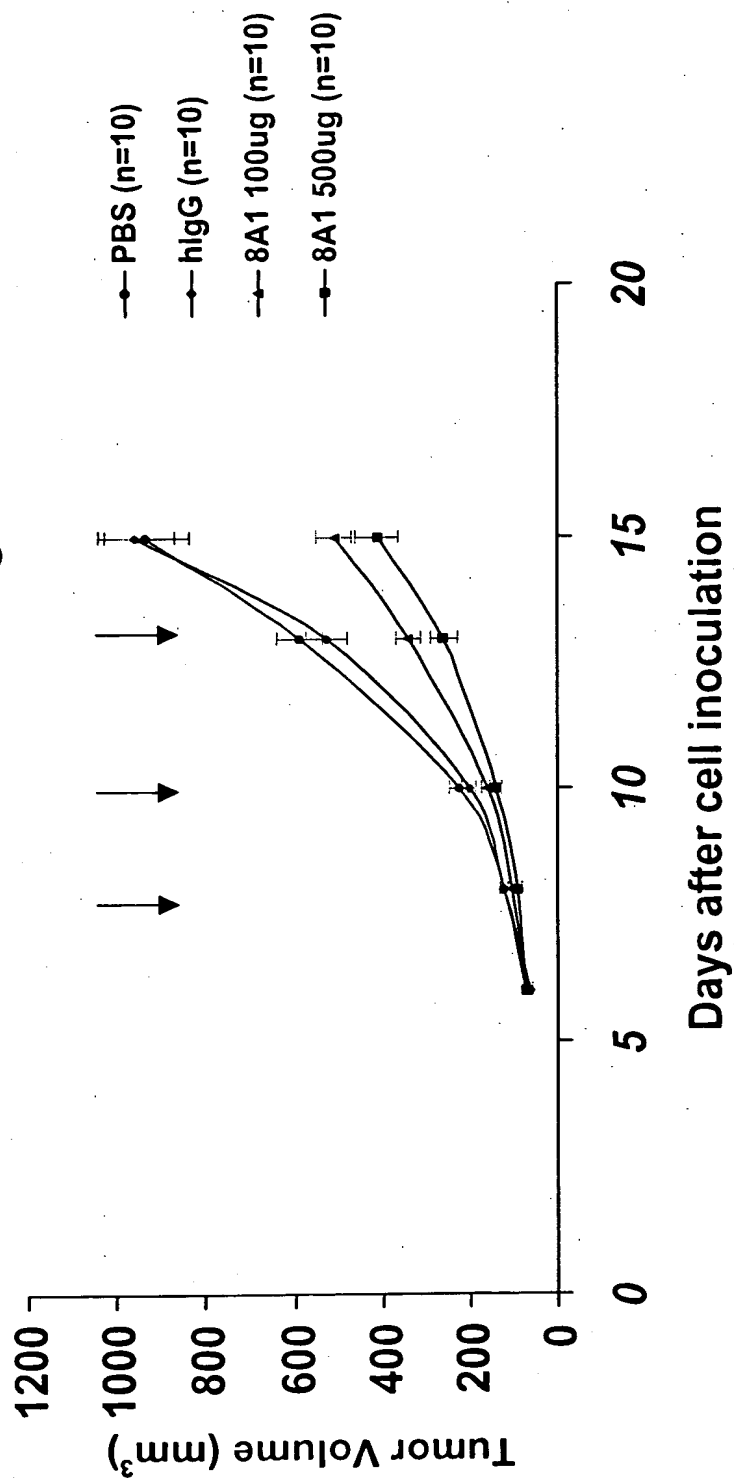


Figure 19

